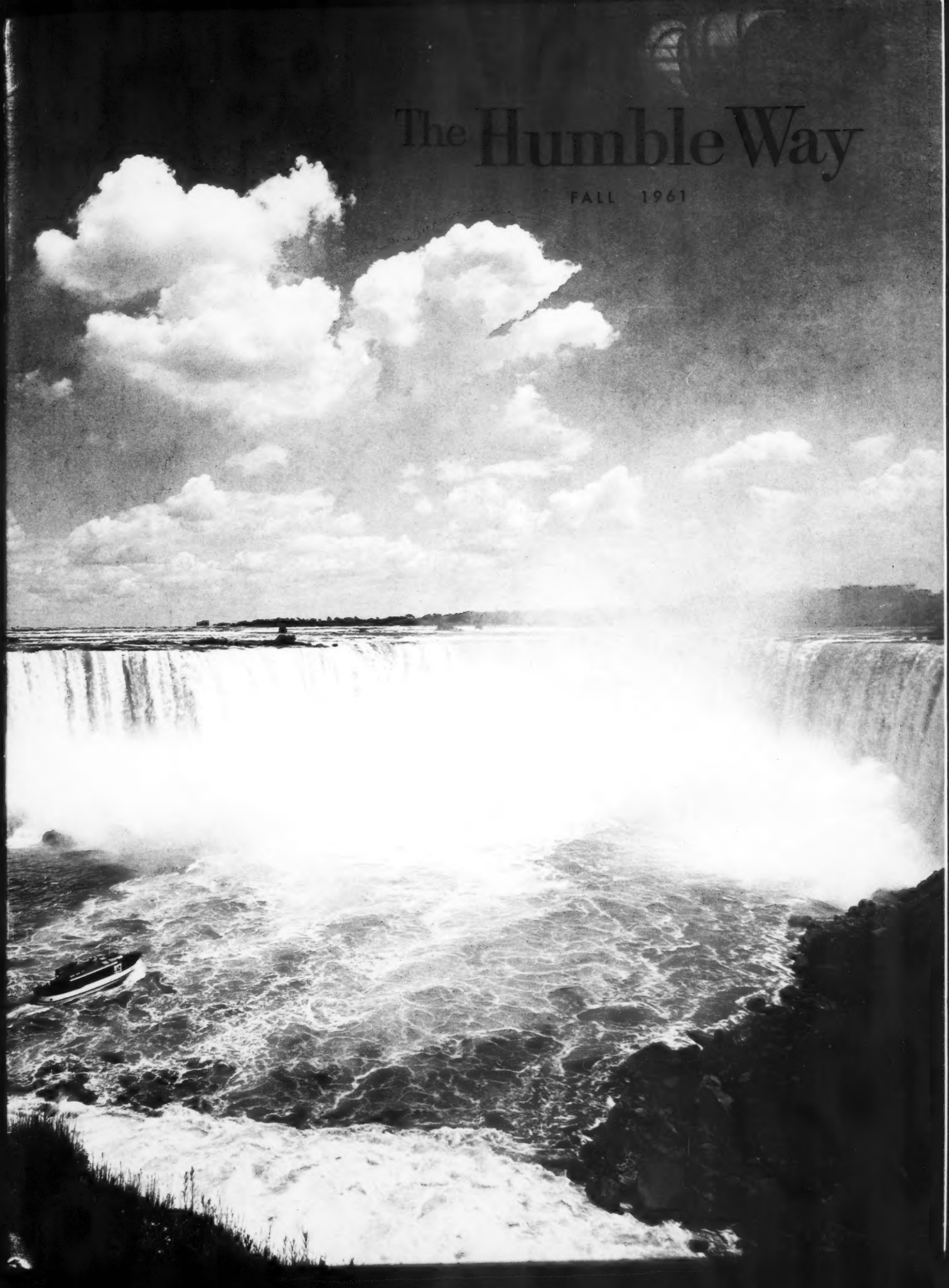
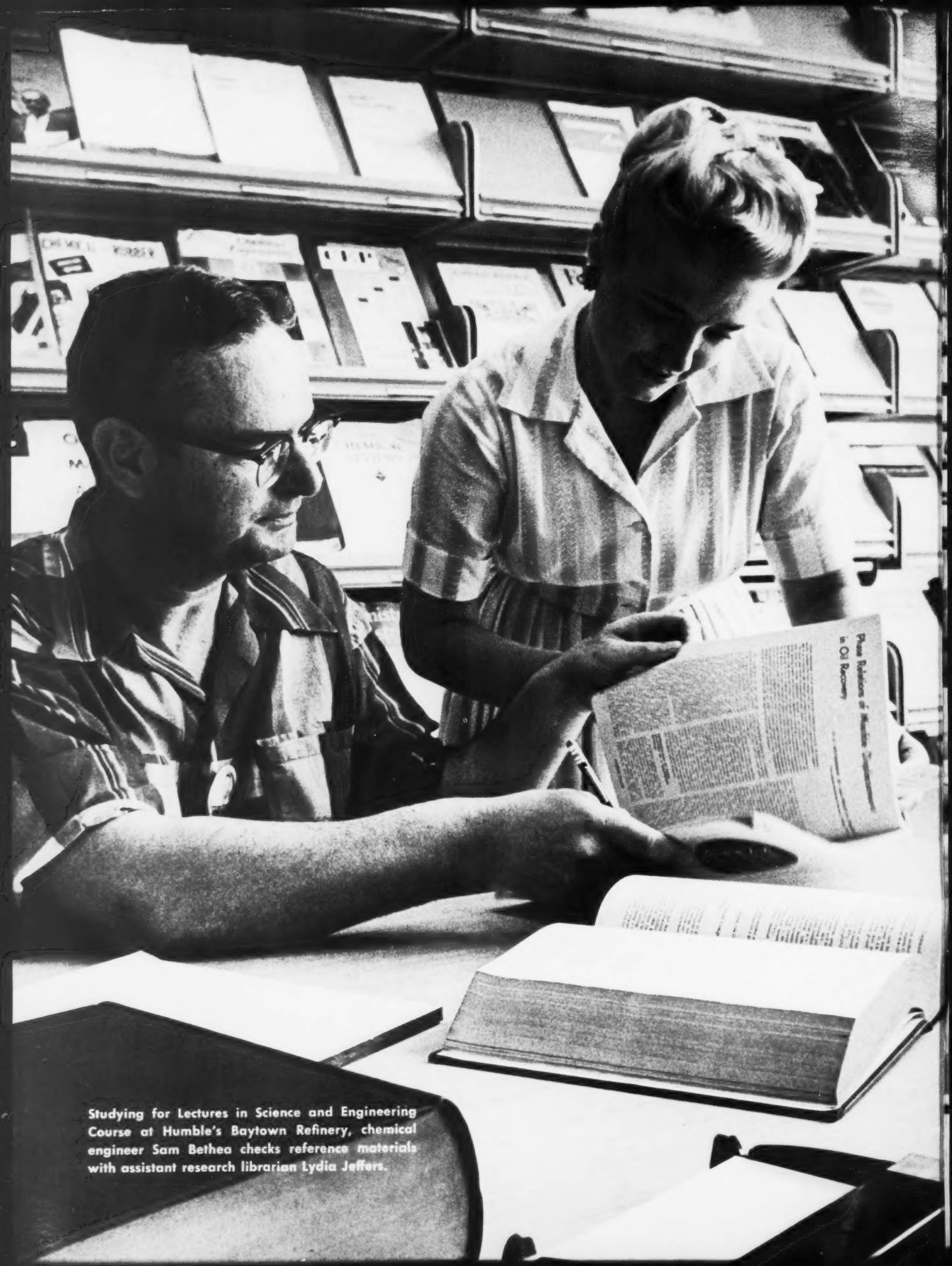

The Humble Way
FALL 1961



Studying for Lectures in Science and Engineering Course at Humble's Baytown Refinery, chemical engineer Sam Bethea checks reference materials with assistant research librarian Lydia Jeffers.

The Humble Way
FALL, 1961
Vol. XVI No. 4

A NEW BOARD CHAIRMAN AND A NEW PRESIDENT

IN A MOVE designed to strengthen the executive management organization of Humble Oil & Refining Company, the board of directors has promoted President Morgan J. Davis to the position of chairman of the board, and has elected Carl E. Reistle, Jr., formerly executive vice president, to succeed him as president.

Both changes became effective on September 1.

The office of chairman of the board is a newly created position in which Mr. Davis will continue to serve as the Company's chief executive.

MORGAN J. DAVIS
Chairman of the Board

Both the new chairman of the board and the new president have long been associated with the Humble organization. Mr. Davis was president, and Mr. Reistle was executive vice president of the former Humble company at the time it was merged with Esso Standard and Carter Oil companies, on January 1, 1960, to form the new nation-wide Humble Oil & Refining Company.

Mr. Davis, a native of Anson, Texas, joined the old Humble Company in 1925 after receiving a bachelor of arts degree in geology from The University of Texas. During his first year as an employee, he was assigned the job of geologist in charge of Humble's exploration office at Roswell, New Mexico.

After four years of oil-hunting in New Mexico, he left Humble and joined Nederlandsche Koloniale Petroleum Mig., taking part in that company's exploration work in Java and Sumatra.

Returning to the United States in 1934, Mr. Davis rejoined Humble as district geologist in New Mexico. Two years later, he was transferred to Houston as division geologist for the Gulf Coast Division. After four years in that position he was promoted to acting chief geologist, and the following year he became chief geologist.

Mr. Davis was made manager of Humble's Exploration Department in 1946. While serving as manager, he continued to perform the duties of chief geologist.

In May, 1948, Mr. Davis was elected a member of the board of directors, and three years later he was named a vice president. He became executive vice president in 1956, and in April, 1957, was elected president.

CARL E. REISTLE, JR.
President

Carl E. Reistle, Jr., was born in Denver, Colorado, and graduated from the University of Oklahoma in 1922 with a bachelor of science degree in chemical engineering.

He began his oil industry career as a roustabout for The Carter Oil Company during summer vacations while attending college. Soon after his graduation, he joined the U. S. Bureau of Mines in Bartlesville, Oklahoma, as a junior petroleum chemist.

In 1933, he became chairman of the East Texas Engineering Association, a cooperative organization formed for the purpose of obtaining engineering data about the East Texas oil field.

Mr. Reistle joined Humble in 1936 as engineer-in-charge of the Petroleum Engineering Division. He advanced to head of the division in 1940, and remained chief petroleum engineer until 1945, when he was named manager of production operations. He was elected a member of the board of directors in 1948, and a vice president in 1955. He became executive vice president in 1957.

Unifying The

Humble Pipe Line Company and Interstate Oil Pipe Line Company are merged to form a single Humble affiliate

P. H. HUNTER
President

W. S. SPANGLER
Executive Vice President

S. BROWN
Vice President

W. F. DAVIS
Vice President

C. E. SHAVER
General Counsel

MEMBERS OF
HUMBLE PIPE LINE COMPANY
BOARD OF DIRECTORS

AS a further step in the unification of domestic operations of Standard Oil Company (New Jersey) under the Humble name, Interstate Oil Pipe Line Company and Humble Pipe Line Company were merged on July 31 to form a new and expanded Humble Pipe Line Company.

The new company, a wholly owned affiliate of Humble Oil & Refining Company, is incorporated in Delaware, but with its corporate headquarters in Houston.

With a combined network of more than 12,300 miles of gathering lines and trunk lines, the new company has a throughput capacity of about 1.4 million barrels a day, making it the nation's leading pipe line transporter of crude oil and oil products.

Most of these newly merged facilities are located in Texas and Louisiana, two states which account for more than half of the nation's total daily crude oil production. The pipe line system, however, also extends beyond Louisiana into the producing areas of Mississippi. In addition, the company operates one short crude oil pipe line system in southern Illinois and another in Montana (see map on page 3). In Texas, the company's facilities include a 254-mile products pipe line which runs from Baytown Refinery, on the Gulf Coast, to the populous Dallas-Fort Worth area. Plans have also been announced for the immediate construction of a new 270-mile products pipe line from Baytown Refinery to the San Antonio and Austin areas. Humble Pipe Line Company also owns about 14 per cent of Dixie Pipe Line Company, an LPG line now under construction, which originates at Mont Belvieu, near Baytown, Texas, and extends to Raleigh, North Carolina.

Merger of the old Humble and Interstate companies brings together under unified management two major

Arteries of Oil

oil transportation systems which separately have served important southwestern and mid-continent producing areas for many years.

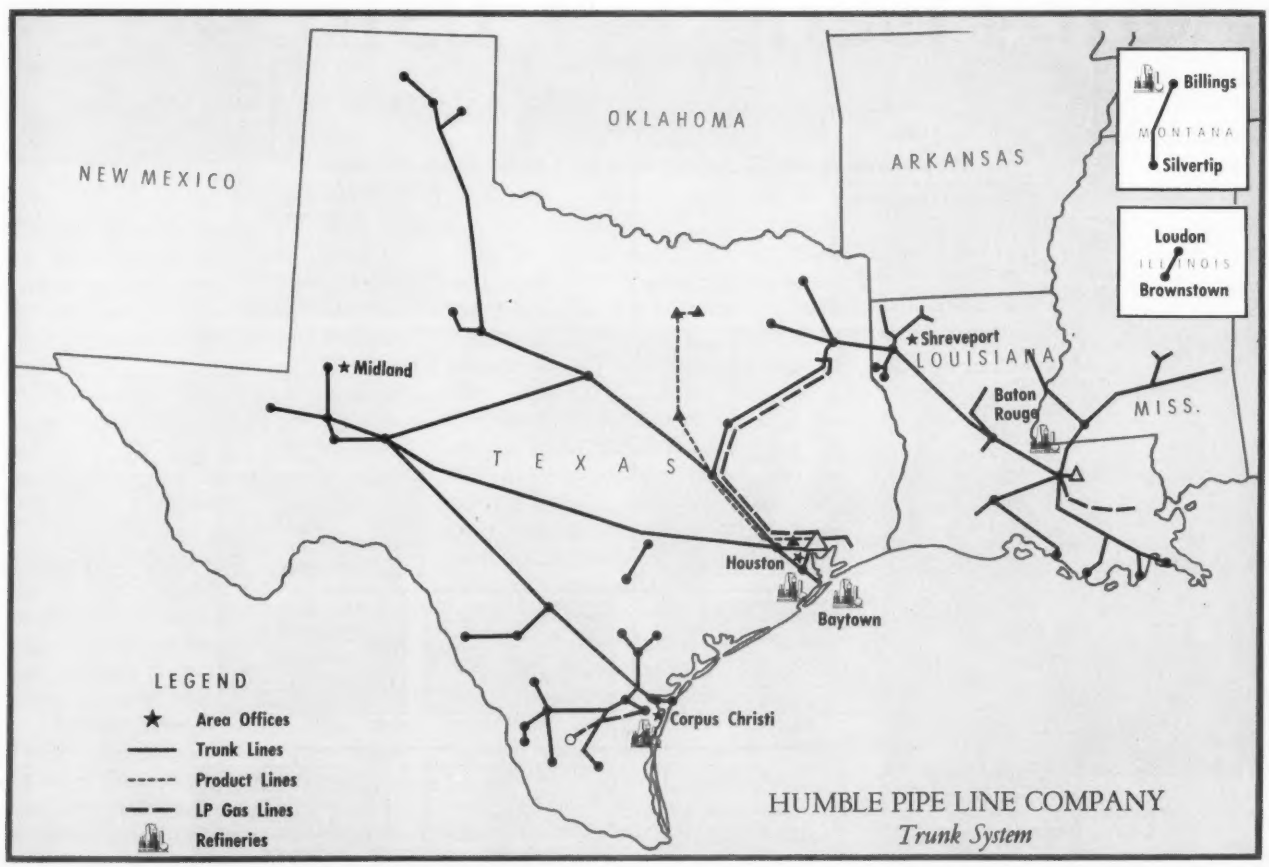
The original Humble Pipe Line Company was organized in 1919 as a wholly owned affiliate of the old Humble Oil & Refining Company. Its initial facilities, purchased from Southern Pipe Line Company, consisted of less than 50 miles of field lines in two widely separated Texas oil fields—Goose Creek and Burkburnett.

But the company grew rapidly. By 1950, more than 8,600 miles of gathering and trunk lines had been added to its system, and Humble Pipe Line had become one of the nation's leading oil transport companies on the basis of volume of crude carried.

Altogether, during its 42 years of operations prior to the recent merger with Interstate, the old Humble Pipe Line Company gathered and delivered more than six and a quarter billion barrels of oil—enough to supply the total U. S. demand for more than two years at today's rate of consumption. Except for a small system in southeastern New Mexico, which was sold in 1955, all of the company's operations were in Texas.

Interstate Oil Pipe Line Company, with headquarters in Shreveport, has provided service of similar significance in its areas of operation.

Interstate was formed in 1945 by the merger of Oklahoma Pipe Line Company and the Pipe Line Department of Standard Oil Company of Louisiana—two companies whose close association was one of long standing. As early as 1909, they had joined hands with Prairie Pipe Line Company to build a much-needed crude oil line from the Glenn Pool producing field in Oklahoma to Louisiana Standard's Baton Rouge Refinery.



In the merger of 1945, the Oklahoma company brought into the new Interstate company a well-established pipe line system serving important oil producing areas of Illinois, Oklahoma, and Mississippi, while the Louisiana Standard Pipe Line Department contributed gathering and trunk line facilities serving the major fields of Louisiana and Arkansas. Subsequently, Interstate sold its facilities in Oklahoma and Arkansas, while it pushed new lines eastward into the new producing areas of Mississippi.

At the time of the Humble-Interstate merger this summer, the major portion of Interstate's system was concentrated in two states: Louisiana and Mississippi. These facilities, with the shorter systems in Illinois and Montana, gave Interstate a total throughput capacity of some 604,000 barrels daily. Interstate also owned 40 per cent interest in Yellowstone Pipe Line Company, with a 625-mile products system from Billings, Montana, to Spokane, Washington, and Great Falls, Montana. It designed and is now constructing the 285-mile West Shore Pipe Line Company products system from Chicago to Milwaukee and Green Bay, Wisconsin, in which it owns 11½ per cent interest.

In the reorganization necessitated by the merger of the two companies, P. H. Hunter, former president of Interstate, was named president of the new Humble Pipe Line Company. Executive vice president is W. S. Spangler, who had been president of the old Humble Pipe Line Company.

Members of the board of directors of the new company are: P. H. Hunter, W. S. Spangler, W. F. Davis, S. Brown, and C. E. Shaver. Mr. Davis and Mr. Brown were former vice presidents and directors of Interstate; Mr. Shaver was a director of the old Humble Pipe Line Company.

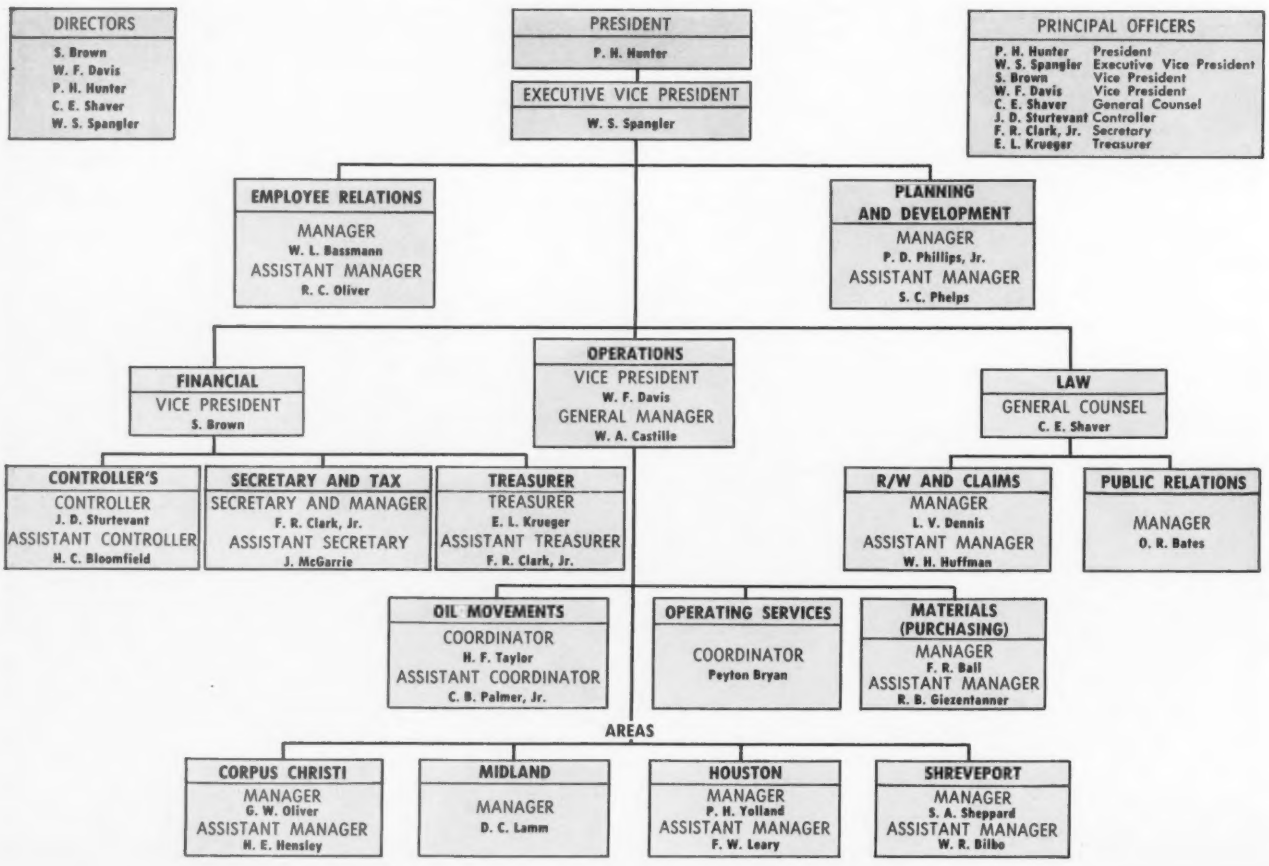
Officers of the merged firm, in addition to President Hunter and Executive Vice President Spangler, include the following:

W. F. Davis, vice president-operations; S. Brown, vice president-financial; C. E. Shaver, general counsel; E. L. Krueger, treasurer; F. R. Clark, Jr., secretary and assistant treasurer; J. D. Sturtevant, controller; J. McGarrie, assistant secretary and assistant treasurer; H. C. Bloomfield, assistant controller; and C. P. Endress, assistant treasurer. (For other key appointments and organizational structure, see chart below.)

Field operations of the merged company are divided into four geographical areas with area offices located at Shreveport, Houston, Midland, and Corpus Christi. The Shreveport Area includes all former Interstate operations. The other three areas correspond with the former East Texas, South Texas, and West Texas areas of the old Humble organization.

HUMBLE PIPE LINE COMPANY

MANAGEMENT ORGANIZATION CHART



Future tree farmers plant pine seedlings on school forest acreage set aside by the Humble Company. Plainview and Pitkin schools will harvest all profits from their trees.

Dedicated to Conservation

Humble designates two school forests within its Central Louisiana pine plantation

THE ultimate future of America's natural resources—petroleum and timber among them—depends largely on the sense of stewardship that can be engendered in each succeeding generation.

The Humble Company, among many others, recognizes the importance of enlightening and enlisting youth in the cause of conservation. As a step in this direction, the Company has set aside two 40-acre parcels of land in Central Louisiana to be used as school forests. For 60 years, two schools will receive all timber proceeds from the woodlots. At the same time, these plots will continue to serve as forest laboratories for vocational agriculture classes.

The two schools—Plainview and Pitkin—are situated within the boundaries of Humble's 46,000-acre tract of cutover pinelands where the Company is carrying out an intensive reforestation program. Five years ago, nearly two-thirds of these Company-owned acres lay denuded and idle. By 1964, as a result of this reforestation effort, the plantation will be blanketed with young pines. Eventually, Humble expects to harvest a moderate profit from these trees.

Students at Plainview and Pitkin schools have taken an active part in this land rehabilitation project. On the acreage set aside as school forests, they have planted more than 100,000 pine seedlings in five years under the supervision of Company foresters.

Perhaps more important is the fact that the students' interest in conservation, awakened by participation in the school forest projects, does not end at graduation. Several former students of the two schools are now working full-time in Humble's reforestation program; others have gone on to college for further studies toward careers in forestry.

School forest lease is presented to Plainview principal Mike Erwin by Humble's Harvey Condron, at left.

An Age of Kings

Fifteen-part Shakespearean pageant, sponsored by Humble, to begin this season on National Educational Television

Struggle for power in bloody War of the Roses takes dramatic turn in episode from "An Age of Kings," epic television series of Shakespeare plays.

FIFTEENTH Century England comes alive in all its splendor and violence this fall and winter in "An Age of Kings," a unique cultural series bringing the masterful works of William Shakespeare to prime-time, nation-wide television audiences on Friday evenings.

The epic presentation of the Bard's history plays, brilliantly produced by the British Broadcasting Corporation, will be aired over 55 affiliated stations of the National Educational Television network, beginning on October 20 in some cities (see complete schedule on facing page).

The NET showing of the plays is underwritten by a Humble Company grant which will enable the educational channels to display the series over a three-year period. The programs carry no commercial message; only an audio-visual acknowledgment of Humble's sponsorship.

In previous television presentations in England, New York City, and Washington, D. C., the series of Elizabethan history-dramas has attracted

Royal revenge is Queen Margaret's as her army captures and beheads Duke of York. Historical dramas feature all-British cast.

critical acclaim and large audiences. Standard Oil Company (New Jersey) sponsored the series on commercial television stations in New York and Washington last winter.

"An Age of Kings," is a Shakespearean pageant in 15 parts. It cuts across 86 turbulent years of English history and chronicles the rise and fall of seven monarchs. Eight of Shakespeare's consecutive "King" plays are divided and rearranged to form 13 one-hour dramatizations and two others running 75 minutes each.

Here is rich, ornate history told in great literature. To make it more meaningful to the average viewer, Dr. Frank C. Baxter will serve as host. Shakespearean authority, retired professor of English at the University of Southern California, and oft-honored television personality, Dr. Baxter will trace royal family trees and unravel geographical and historical threads in weekly introductory and concluding remarks. In addition, a program guide to all plots and characters will be made available to the public.

Those who follow "An Age of Kings" regularly will see the unfolding of a cycle of plays with the same actors appearing as the same characters in successive episodes. A cast of 20 top-flight British players enact about 200 roles in all, including 50 speaking parts.

The program's primary aim is to help satisfy the taste of many people for classic drama—to take a step forward in providing intelligent, cultural programs for television. The Shakespearean series should also be interesting and helpful to high school and college students of English literature and history.

But Shakespeare's ageless appeal is not limited to scholars and those of cultural bent. He can be—and in "An Age of Kings" is—exciting to almost everybody.

As one television critic has suggested, the current season's cowboys and private detectives may meet their match in characters the stature of King Richard the Crookback, Henry V, Joan of Arc, and Sir John Falstaff.

SCHEDULE

"An Age of Kings" will be shown each Friday evening on the following stations during the periods indicated. Check your local television listings for exact time.

October 20 through January 26

Boston	WGBH-TV
Chicago	WTTW
San Francisco	KQED
Houston	KUHT
Pittsburgh	WQED
New Orleans	WYES-TV
Durham, N. H.	WENH-TV
Augusta, Maine	WCBB

October 27 through February 2

Sacramento	KVIE

November 10 through February 16

Madison	WHA-TV
Andalusia, Ala.	WAIQ
Birmingham, Ala.	WBIQ
Munford, Ala.	WCIQ
East Lansing	WMSB
Columbus	WOSU-TV
St. Louis	KETC
Philadelphia	WHYY-TV
Dallas	KERA-TV

December 1 through March 9

Memphis	WKNO-TV
Urbana	WILL-TV
Denver	KRMA-TV
Lincoln	KUON-TV
Chapel Hill	WUNC-TV
Tucson	KUAT
Phoenix	KAET

December 22 through March 30

Oklahoma City	KETA
Tulsa	KOED-TV
Detroit	WTVS
Cincinnati	WCET
Oxford, Ohio	WMUB-TV
Seattle	KCTS-TV
Washington, D. C.	WETA

January 12 through April 20

Milwaukee	WMVS-TV
Atlanta	WETV
Miami	WTHS-TV
Salt Lake City	KUED
Athens, Georgia	WGTV
Buffalo	WNED-TV
Tacoma	KPEC

February 2 through May 11

Jacksonville	WJCT
Gainesville	WUFT
Tampa	WEDU
Corvallis, Ore.	KOAC
Albuquerque	KNME-TV
Des Moines	KDPS
Tallahassee	WFSU
Portland, Ore.	KOAP

March 2 through June 8

Toledo	WGTE
Louisville	WFPK
Ogden, Utah	KWCS
Waycross, Georgia	WXGA
Norfolk	WHRO
Carbondale, Ill.	WSIU

Special Scheduling

San Juan, Puerto Rico	WIPR-TV
Mayaguez, Puerto Rico	WIPM-TV

Bustling Miami, Florida, is one of the major southern metropolitan areas where Humble has recently started marketing its products under its own name.

Humble Extends Marketing In Southeast

Company moves rapidly to establish market outlets under its own name following unexpected consent judgment

SPURRED by recent court action, the Humble Company is now moving rapidly to extend its marketing operations in five southeastern states—Mississippi, Alabama, Georgia, Florida, and Kentucky.

Here, in brief, is the background of the situation:

• For many years Esso Standard, and more recently, Humble, has supplied oil products at competitive prices under contract to Standard Oil Company (Kentucky). The latter is a non-affiliated company which has no refining facilities of its own, but carries on extensive marketing operations in the South. The current contract, in effect since July, 1956, provides that Humble will supply 80 per cent of the Kentucky company's requirements of motor gasoline and distillate fuels. Kentucky Standard can call for a stepwise termination of the contract at any time.

• In a suit filed in 1958 the United States Department of Justice asked for a cancellation of this contract, charging that the arrangement between Humble and Kentucky Standard had anti-competitive effects which should not be permitted to continue. This action is still pending.

• On June 5, 1961, however, the Department of Justice announced a consent judgment in the above case, in which it gave tacit approval to a proposed merger of Standard Oil Company (Kentucky) and Standard Oil Company of California. Among other things, the consent decree specified that Kentucky Standard must terminate its contract with Humble by exercising the stepwise termination clause contained in the contract. This means that the Kentucky company will buy less and less of its product requirements from Humble over the next few years. After July 1, 1966, neither Kentucky Standard nor California Standard may buy from Humble any of their refined petroleum

product requirements, except residual fuel oil and petrochemicals, for marketing in 11 southern states.

Humble had no part in the negotiations leading up to this consent decree and did not approve or consent to any portion of the judgment. In fact, Humble was not advised of pending discussions with the Department of Justice in this regard.

As a result of the judgment, Standard of California will eventually be able to supply at least 60 per cent of the Kentucky company's requirements and, after 20 years, all of its requirements. In contrast, Humble's contract with the Kentucky company, which the decree requires to be terminated in accordance with its terms, calls for the supply of 80 per cent of the Kentucky company's requirements subject to stepwise termination at any time by Kentucky. Thus, a contract under which competition was not foreclosed is being supplanted by an arrangement under which it will be.

Aside from the long-range implications of the unusual consent judgment, the stepwise termination of the Humble-Kentucky contract posed an immediate problem for Humble. Humble faced a serious loss of revenue unless it could quickly find new market outlets for the large quantities of products that it could no longer sell to Kentucky Standard.

Acting without delay, Humble's management took immediate steps to gain a marketing foothold in Mississippi, Alabama, Georgia and Florida. Russell H. Venn, vice president in charge of the company's newly established Southeast Region, was detached from the duties of that office temporarily to devote full-time efforts to establishing new marketing outlets under the Humble name. C. G. Herrington, general manager of the Southeast Region, was assigned the duties of acting head of the region during Mr. Venn's absence.

The Humble name, seen here on a recently converted service station at Bay St. Louis, Mississippi, is now appearing on more and more stations throughout the South.

On June 15, ten days after the consent judgment was made public, Humble announced that it was establishing service station outlets selling Esso branded products under the "Happy Motoring" sign in Mississippi. The first of the new Humble stations in that state were located in Biloxi, Gulfport, Natchez, Greenville, and Jackson. Subsequently, stations have been added in Walnut, Clarksville, West Point, Corinth, Cleveland, Bay St. Louis, and Ocean Springs.

In mid-July, the company announced further extension of its direct marketing operations to the states of Alabama, Georgia, and Florida. The first service stations to fly Humble's Esso oval in those states were at Sheffield and Birmingham, Alabama; Ringgold, Rome, and Rossville, Georgia; and in Miami and Pensacola, Florida. Additional Humble stations have since been opened in Alabama at Florence and Cullman; in Georgia at Rome; in Florida at Jacksonville, the Miami area, the Sarasota area, the West Palm Beach area, and the Orlando area.

The company has also obtained a number of additional sites in major metropolitan areas of the South, and will start construction of new stations shortly.

While these outlets still constitute only a token representation in the southeastern market, Humble expects to expand its marketing operations rapidly by the addition of retail outlets and bulk stations. "A thorough study of the marketing potential in the southeastern states has convinced us that our direct marketing operations should be extended to that area," Mr. Venn said. "We now will be marketing Esso branded products in all nine states which make up our Southeast Region."

At about the same time it started marketing under the Esso brand in the four southeastern states, Humble also converted its service stations in Kentucky to the sale of Esso branded products. These stations, located in the Louisville area, had been selling under the Oklahoma brand name.

"For the first time," Mr. Venn said, "our Kentucky customers, as well as those from Maine to Florida passing through the state, will be able to purchase gasoline from us under a brand name with which they have been familiar in 22 other eastern and southern states."

With its new representation in Mississippi, Alabama, Georgia, Florida and Kentucky, Humble is now marketing its products under its own brand names in a total of 45 states.

EXPANSION INTO NORTHERN CALIFORNIA

Continuing its marketing expansion on the West Coast, the Humble Company early in August hoisted the ENCO oval over 21 newly converted service stations in Northern California and, for the first time, began offering ENCO products to the motorists of that area.

The service stations, recently acquired by Humble from Petroleum Products Company, are located in Stockton, Modesto, Turlock, Oakdale, Waterford, and Acampo.

Humble has had limited marketing operations in Southern California since late last year, when it opened 37 ENCO stations in the Los Angeles metropolitan area.

What Petroleum Energy Means To You

"Thanks to oil, we now turn out goods in one day worth five times as much per man as in 1859 and we have multiplied the total work force several fold at the same time. National income has multiplied thirty times. Farm mechanization makes it possible to feed a population five times larger with less investment of man's labor. The use of mechanical energy has increased 200 times, and machines now do 99 per cent of the work in this country..."

JOHN M. KELLY
Assistant Secretary of the Interior

JULIUS CAESAR, conqueror of Europe and ruler of the mighty Roman Empire, could never travel faster than a horse could run.

George Washington, who lived 1700 years after Caesar, could do no better; he, too, had only the horse for motive power.

Today, the average American thinks nothing of whizzing about the country in a comfortable automobile at a mile-a-minute clip. If he is really in a hurry, he can step aboard a jet airliner and be whisked across the continent in less time than it took the Father of our Country to travel 50 miles.

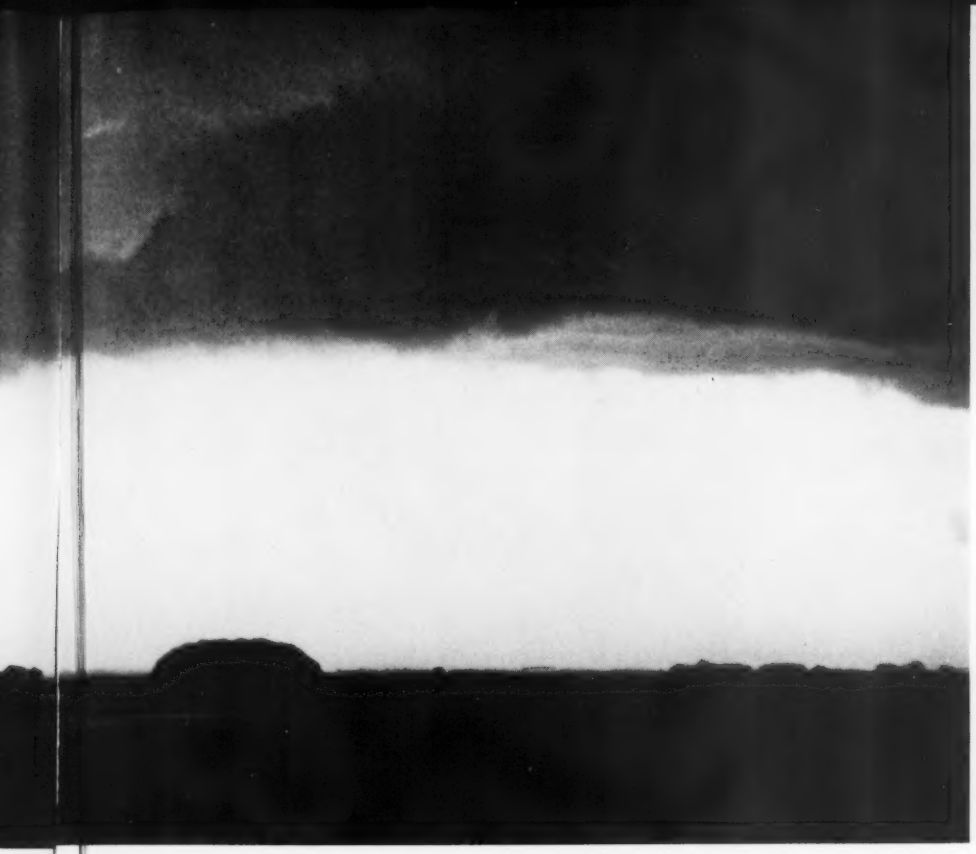
Somewhere between the plodding pace of the 18th century horse and the near-sonic speed of the modern jet airliner, a tremendous series of events has occurred. Man has found ways to tap Nature's vast storehouse of energy. With this energy, and the machines it has spawned, men of America have escaped the age-old handicap of dependence upon muscle power, and have raised their standards of living to a level undreamed of by earlier generations. To put it another way, Julius Caesar and George Washington never had it so good.

The energy revolution began in the 18th century with James Watt's invention of a practical coal-burning steam engine. This was a clumsy and noisy contraption, and not very efficient, but it gave men a source of mechanical power such as they had never known before. The steam engine made possible the development of factories, railroads, steamships, and some heavy duty industrial machines. Late in the 19th century, Thomas Edison hooked a steam engine to an electric generator and opened up the way to a bright new world of electrical energy.

But it was petroleum and the internal combusion engine, more than anything else, that unshackled man from his dependence upon muscle power. The gasoline engine brought mobility and versatility into the energy picture; it put wheels under the nation's economy and sent it speeding into new channels of productivity.

As a fuel, gasoline proved to have many advantages over other energy sources. It is powerful, economical, easily contained, and easily transported. Most important, it has been made available in increasing quantities at attractive prices.

By 1900, only 41 years after Colonel Edwin Drake drilled the first commercial oil well and launched the petroleum industry, some 8,000 automobiles could be counted in the United States. They were crude little "horseless carriages," and few people considered them a reliable means of transportation, but they were the vanguard of a



If this tornado's energy could be put to use, it would equal only a fraction of the petroleum energy Humble provides each day.

parade of progress unprecedented in the history of man.

Encouraged by the success of the gasoline-powered internal combustion engine, inventors and oil men have continued to search for new and better uses of energy from petroleum. Today, the kerosene which lighted the lamps of 19th Century America has become the basic ingredient in powerful jet engine fuels. Diesel fuel has virtually replaced coal and residual oil as a source of power for railroad locomotives. Gasoline itself has undergone so many improvements that the high octane motor fuels we burn in our 1961 automobiles bear only slight resemblance to the crude gasolines of the Model T days. Natural gas, the Cinderella of fuels, has also come into its own as a convenient fuel and as a source of petrochemicals.

The full effect of the continuing energy revolution on our everyday lives is all but incalculable. This is understandable when you consider that the combined power rating of all the gasoline, diesel, and jet engines in use today probably exceeds the total muscle power of all the men who ever lived.

For a specific example of how the use of mechanical energy multiplies man's productivity, let's look at the age-old task of moving dirt. One modern earth-moving machine, such as you have seen on many construction projects, can scoop up 30 cubic yards of dirt at a bite and haul it away at speeds of more than 30 miles an hour. The operator of this diesel-powered machine accomplishes more work in a day than 1,200 men could do with wheelbarrows and muscle power alone.

The farmer of a century ago, working only with muscle power, could produce just about enough food to feed himself and three other people. Today's American farmer—using oil-powered tractors and numerous other machines—produces seven times as much. He can feed himself and 23 other people.

All comparisons between living standards in the United States today and a century ago point up the same self-evident fact: progress stems from the increasing use of energy. We are now using about 15 times as much energy as we did in 1860, and new demands are developing constantly. Most of these vital supplies of energy come from oil and natural gas.

To be more specific, our nation now consumes energy at the rate of about 45,000 trillion BTUs* a year, and nearly three-fourths of this total is supplied by oil and gas. By 1980, the experts predict, we will be using 78 per cent more energy than we consume today.

Since the energy from oil and gas plays such an important role in our daily lives, one would expect people to be keenly aware of its significance. Too often, this is not the case. The enormous energy of these fuels is so readily and easily available to everybody that practically nobody gives it a thought. Like the purloined letter in Edgar Allen Poe's story, the marvelous benefits we derive from petroleum energy are too obvious to be noticed.

As "America's leading energy company," Humble is especially anxious to create a greater public awareness of the role of petroleum in providing the energy that we take for granted. Toward that end, the Company is now devoting a sizeable share of its advertising budget to telling the energy story.

The first magazine advertisement in this promotional campaign featured a picture of Niagara Falls (see front cover). The accompanying text pointed out that if all the roaring energy in that mighty cataract could be harnessed, it would still amount to only one-sixth of the energy, minute by minute, that Humble supplies in gasoline alone.

Another eye-catching advertisement in the series featured the dramatic photograph of a tornado reproduced above. The message accompanying this picture called attention to the fact that Humble supplies enough energy each day in the form of flight fuels alone to equal the unbridled energy of at least ten such tornadoes.

With these, and subsequent dramatic presentations, all carefully authenticated, Humble hopes to help impress upon the people of our nation the fact that tremendous quantities of energy are necessary for our abundant way of life, and that petroleum is the most important source of that energy.

*British Thermal Unit, the amount of heat required to raise the temperature of a pound of water by one degree Farenheit.

Opening day visitors to Six Flags Over Texas this summer were two Humble families from Houston. Pausing before entrance are, at left, Carla and Bob Peterson with Kay, Kathryn and Ray; to their right are John and Maureen Cruickshank with Peter, Gerard, and Ann.

Visitors find history-flavored fun at . . .

SIX FLAGS

Happy Motoring freeway, sponsored by the Humble Company, is favorite ride with young and old. Streamlined sports cars cruise along safety track at about 10 miles per hour, can be driven even by a small child. Little autos operate 12 hours on tankful of ENCO gasoline; fleet carries 500 passengers each hour.

Sixshooters and frontier justice fascinate Gerard, Ann, and Peter Cruickshank, newcomers to the Southwest. On courthouse steps in Texas section, they meet Judge Roy Bean, "Law West of the Pecos." Moments later, they witnessed mock gun battle between badmen, sheriff's deputies.

Stagecoach mail run rumbles along Butterfield Overland Trail in Confederate section of Six Flags. Passengers narrowly escape marauding Indians and masked outlaws who attempt hold up.

OVER TEXAS

THE Southwest gained a major travel attraction this summer with the opening of Six Flags Over Texas, a giant center of family entertainment which depicts the history and legend of the Lone Star State under the banners of six sovereign nations.

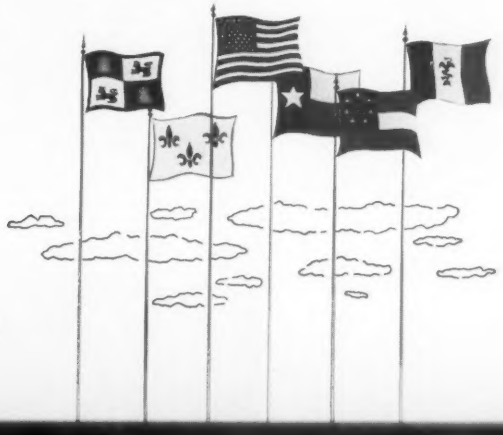
Six Flags park, divided into six separate sections, tells the richly colorful story of Texas under the flags of Spain, France, Mexico, the Republic of Texas, the Confederacy, and the United States. The gay sections delight all ages with rides of every description, live shows and adventure trails, and picturesque shops and museums.

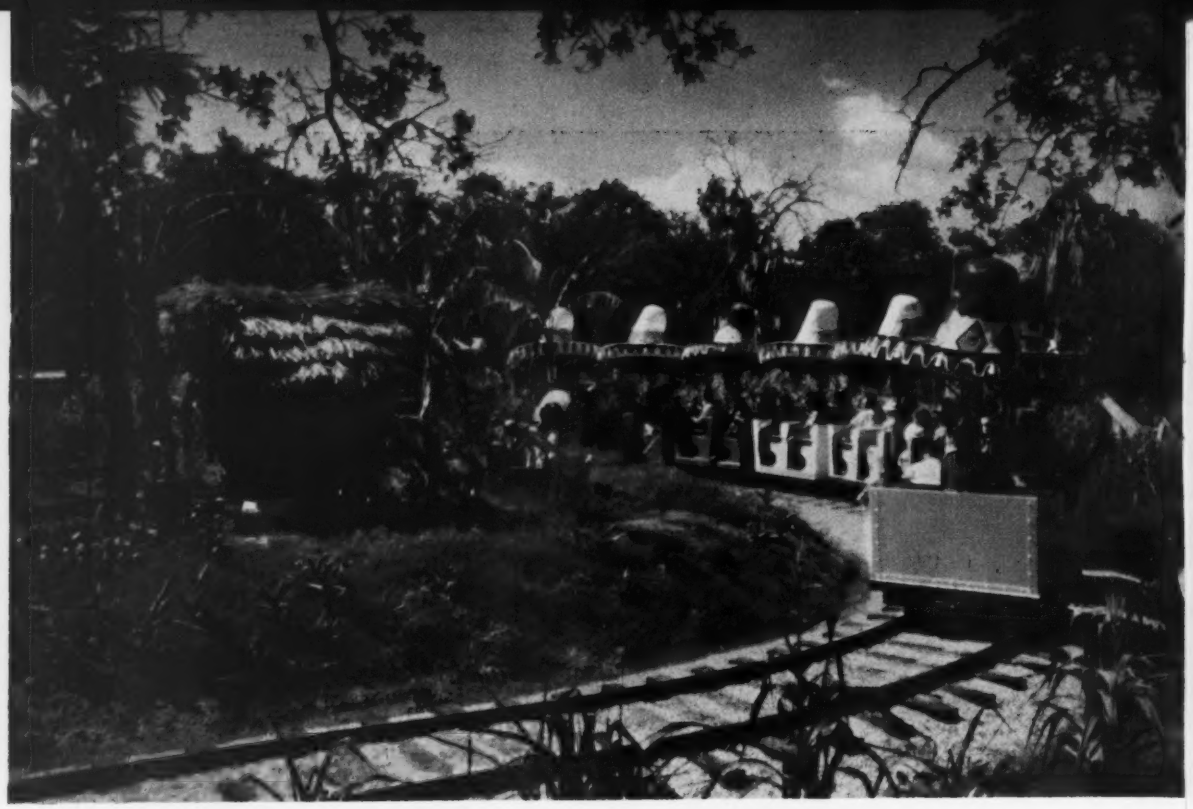
Located midway between Dallas and Fort Worth, Six Flags is carved from 105 oak-studded acres along a twisting river bed. Unveiling of the $10 million historical playground culminated three years' planning and a full year of construction. It was designed by the chief engineer of Disneyland in California and Freedomland in New York.

Within the modern U.S.A. section of Six Flags, you find the Happy Motoring freeway, sponsored by Humble. Here, 23 miniature sports cars—powered by ENCO gasoline—roll merrily along a scenic and completely safe junior highway of tomorrow. Six thousand opening day visitors took a spin in the little automobiles, making them one of the most popular of 40 rides and attractions.

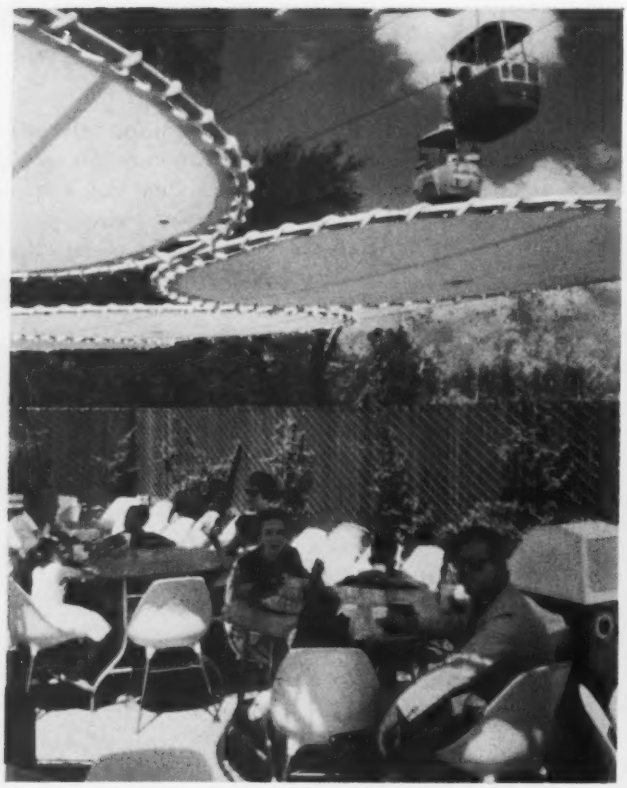
Among those who attended the August 5th premier of Six Flags Over Texas were two Humble employees and their families from Houston—Bob Peterson, associate landman in the Exploration Department; and John Cruickshank, an analyst in the Supply and Transportation Department.

This is the picture story of their day.



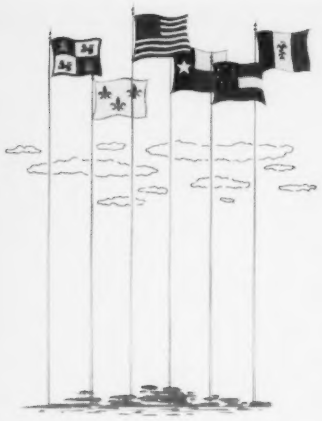


Ferrocarril Fiesta, one of two train rides at Six Flags Over Texas, is highlight of gay Mexican section. Musical engine puffs down track past serenading caballeros on sleepy burros, huge twirling tortillas, floating gardens, and an arena where a mechanical matador eludes the horns of a charging bull.



Lunch stop in shady spot refreshes Petersons and Cruickshanks at mid-day. Humble families found complete tour took leisurely five hours. Overhead, Astrolift cars, imported from Switzerland, glide by on 1,000-foot journey across the park.

Coronado's search for mythical riches of seven cities of gold is action-theme of Spanish section. Adventurers accompany conquistador on pack mule trip into dusty Palo Duro canyon, one of dozen rides Six Flags' admission price covers.



Animal Kingdom brings world's tame creatures together into novel feeding and petting zoo. Kathryn, Ray, Carla, and Kay Peterson befriend kid goats. Nearby, there's a baby elephant, a burro, llama, deer, sea lions, and monkeys.

Pueblo brave performs ceremonial hoop dance to tom-tom beat and chant outside Indian Village trading post where tribal arts and crafts are sold. Indians of a most hostile nature are encountered on the La Salle-led French boat trip up steamy swamp past old Fort Saint Louis, another Six Flags adventure trail.

Farm outs and dry hole money played important roles in the drilling of a number of discovery wells in the Albion-Scipio trend fields in South Central Michigan, where the well shown above is located.

DRY HOLE MONEY

Humble contributed $4.5 million and 75,000 acres last year to help other operators drill 858 wells

"JOHN, I've got a problem." Mike McCall, a small operator and promoter, was trying to put together a deal to drill a well which he hoped would find gas.

He unfolded his map on the desk of John Woodward, Humble's District landman, and pointed to his proposed location.

Would Humble support his wildcat well by giving him some of its lease acreage; also paying part of the cost if the well failed to find oil or gas and had to be abandoned as a dry hole?

Woodward had two questions.

"How many acres and how much dry hole money do you need to make your deal?"

Mike wanted Humble to contribute 320 acres of its leases as half of a 640-acre drillsite in a prospective gas area. He asked in addition, $3 per foot of dry hole money for the 8,500-foot test if it turned out to be a dry hole.

Woodward studied the plat—then made one of his own showing Humble acreage in the area. In addition to the 320 acres, other Humble acreage offset or adjoined the proposed location to the south and west. Humble leases in a three-mile radius from the well totaled more than 4,500 acres.

Mike told Woodward he also was asking $1.50 per foot dry hole money from the Big A oil company, some 720 acres of leases from the Big S oil company, and possible dry hole money from a third large operator if an acreage exchange could be effected.

Woodward studied his map carefully, noting early expiration dates on the various Humble leases. Humble, like Mike, had a problem. Many of its leases were expiring within 12 months. If the well were drilled, it would evaluate much of Humble's acreage. If the well became a producer, there would be time to start offset wells and hold acreage. If it were a dry hole, there would be no need to spend additional money to renew leases.

AFTER Mike left, John Woodward took the proposal to the district geologist.

Although Humble already had drilled or supported three recent tests in the general area in order to evaluate several thousand acres of leases expiring within a few months, the geologists recommended that Humble support the proposed well. They felt that this test would finally evaluate the prospect and the idea. As Woodward had told Mike when he first made his proposal, "We like for people to drill on an idea or geological prospect of their own where our ideas meet."

Considering all aspects of the proposal, however, Humble decided to reduce its dry hole money contribution from $3 to $2 per foot or $17,000 because of unfavorable factors in the geological interpretation.

Mike accepted the offer.

His proposal was a relatively simple, straightforward dry hole and acreage contribution deal. Dry hole money is a sum one producer agrees to pay another operator if the latter drills a well to an agreed depth and the well is abandoned as a dry hole. An acreage contribution involves the assignment of leases by one company to another. The latter agrees to drill a well on a lease which he owns or controls in the same area.

In another area, and under different conditions, Mike might have used different methods to promote his well.

In the typical farm out deal one company assigns to someone else its lease on a particular parcel or parcels of land, and the latter agrees to drill a hole on the property. Bottom hole contributions are similar to dry hole money, except that a bottom hole contribution is payable when the well reaches a specified depth regardless of whether the well is a dry hole or a producer. There are many combinations of these deals and many are much more involved with numerous principals, stipulations and conditions to complicate the transaction.

Dry hole money and farm outs are the most common and are growing in importance with each passing year. Some indication of the importance of such deals to the industry may be gained from Humble's records for 1960. In that year Humble's cash contributions and farm out trades helped other operators put together deals to drill 858 wells. Of this total, 651 were dry holes.

Through these deals, Humble contributed more than $4.5 million in dry hole money and more than 75,000 acres of leases to other operators. Another half million dollars in dry hole money was pledged but not paid because the wells found oil or gas and were completed as producers.

Humble's test well contribution program is fairly typical of operations of other large firms in an industry which drilled 46,751 wells last year.

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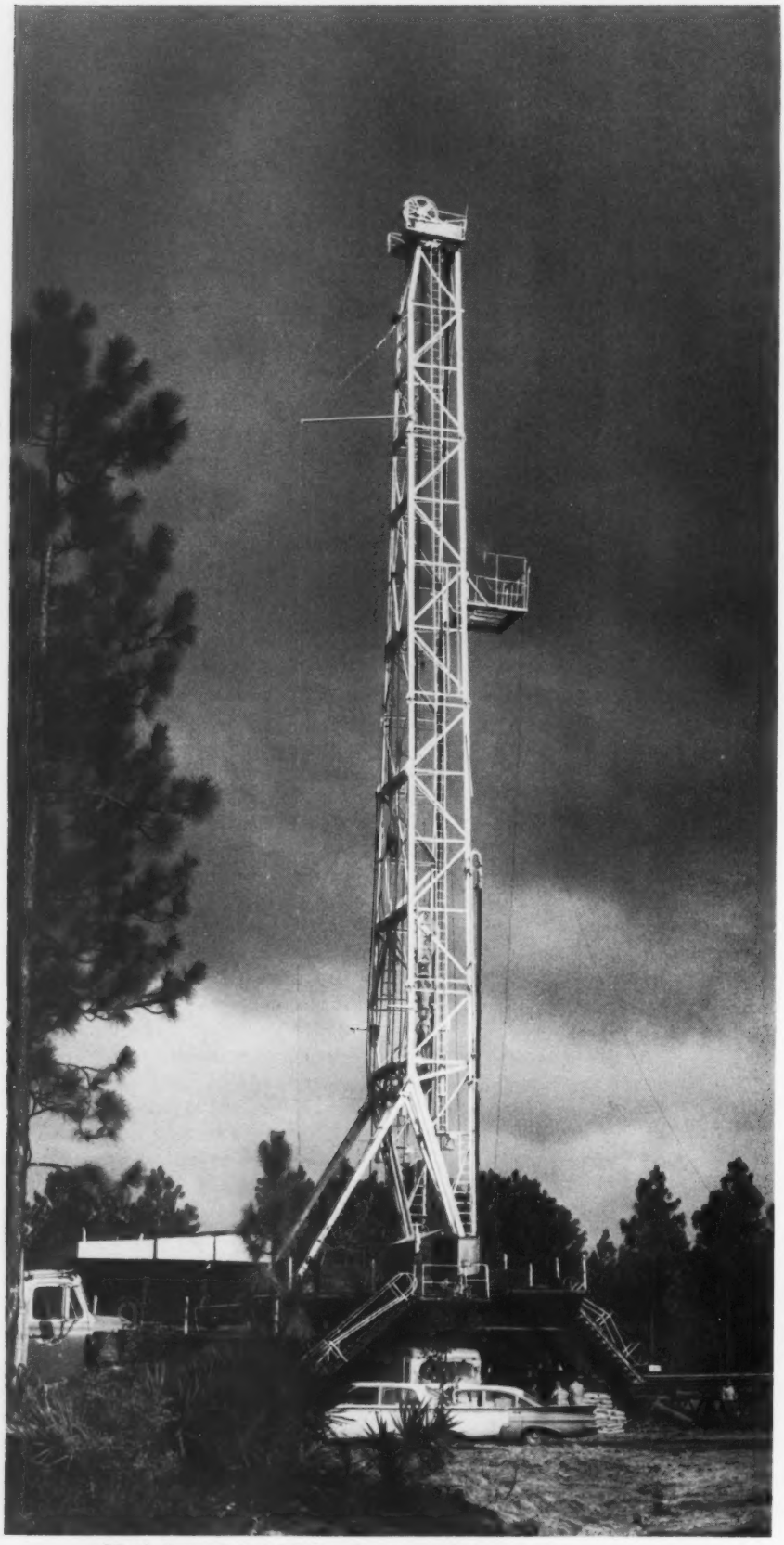


The industry drilled 9,635 exploratory wells last year, but only 8.9 per cent of these wells found oil and only about 3 per cent found it in profitable commercial quantities.

Mike and other small operators, in addition to the wells they drill, provide a vital service to the industry by bringing in outside investors. Traditionally, small operators who promote wells attempt to secure a substantial share of the cost in dry hole money and acreage. Mike, for example, estimated it would cost $70,000 to drill a dry hole on the prospect, or $100,000 if the well found gas and was completed as a producer. The "outside" investors which Mike and other operators bring into their deals include businessmen and others with extra cash and a willingness to risk it in the drilling of a well. By the time the well is drilled, the promoter's share may be relatively small.

THIS sharing or spreading of the risk, long an important factor in the oil business, has become even more widespread in recent years with increased risk, deeper wells and soaring drilling and development costs.

Some operators, for example, may be able to drill a 5,000-foot well for around $40,000 in certain areas, yet a 15,000-foot well may cost the same operator almost 10 to 15 times that much. And many a million dollar dry hole can be found on the record books of the larger oil companies. In 1960, oil companies spent an estimated $2.5 billion dollars drilling and equipping wells, which points up the magnitude of the financing required for this phase of the industry alone.

The element of risk has grown greater, too. Mike's well, for example, turned out to be dry, and was abandoned. He collected dry hole money to reduce his losses. In 1960, only 8.9 per cent of all wildcats drilled found oil. The success rate was 1.2 per cent for condensate and 3.5 per cent for gas. The remaining 86.4 per cent were dry holes. But, before you consider becoming a wildcatter, you should know that of the 8.9 per cent of the wildcats which found oil, only about 3 per cent found it in commercial quantities.

Traditionally, the stronghold of smaller operators has been areas where oil may be found at shallower depths. Generally, small operators drill wells more economically than larger operators who have a higher overhead and other costs.

Companies frequently do the geological and geophysical work necessary

to outline a prospect and then promote a deal with another operator. They farm out acreage or contribute dry hole money, or both. The question naturally arises, if a company has spent money on leases and delineated a prospect, why doesn't it drill the well itself?

HUMBLE believes that a test well program involving fair contributions of dry hole money and acreage for tests to be drilled by others has mutual advantages for all parties concerned.

The independent operators and small companies which drill most of these wells, and in fact considerably more than half of all wells drilled each year, have the advantage of the expensive leasing and exploration programs already completed. At the same time a company with substantial acreage holdings can often test such acreage faster and more economically by such a well promotion program than by drilling its own tests.

There are many factors which lead a company to farm out prospects. Some of these include situations where leases are about to expire and will be expensive to renew; where a company desires more rapid evaluation of acreage; or where smallness of a company's acreage holdings will not justify the gamble of drilling a well.

Sometimes companies even farm out acreage they know will produce. This might be an area with a thin, limited pay formation. The company might not be able to make a profit on a marginal well in such an area, while a small operator with lower overhead could produce the well at a profit. A similar situation might arise in a field with a tight formation where the oil is produced slowly and in small volume over a long period of years. Again a lower cost operator might make a profit.

There are times when a company will drill one well and then farm out acreage and contribute money for another test. This does not necessarily mean the prospect has been proven less desirable. No company, large or small, always finds oil the first time it drills.

Not infrequently a company will go to a competitor and say in substance: "We have the geological information and the money, you have the acreage. Let's deal." Humble on a number of occasions has drilled wells to earn large blocks of acreage.

Companies frequently do geological and geophysical work necessary to outline a prospect and then promote a deal with another company for the drilling of an exploratory well.

A FEW years ago Humble made an acreage exchange and dry hole contribution agreement with a small oil operator. Humble contributed some of its leases to the operator and he in turn assigned to Humble about an equal amount of his leases, thus giving both the operator and Humble a better spread across the possible trend.

The operator drilled the wildcat test on a location suggested by Humble geologists and proved them good prophets. The operator completed six wells on acreage he had received in exchange from Humble. Humble, in turn, completed only three wells on acreage the company had obtained in the exchange; but there was a payoff. The discovery well proved considerable Humble acreage productive and the play extended to cover many Humble leases. Numerous other operators benefited, too, when the play was extended.

The success of the operator was achieved against odds that would make a professional gambler shudder. The odds are nine to one against bringing in a producing well; forty-five to one against that well bringing in a field with more than a million barrels.

The magnitude of these risks in the search for oil staggers the imagination. The roll of operators and companies who have gone broke in the oil business is lengthy, yet there are a few highly successful individuals who cause others to worry when they ask for acreage. So fabulous is their reputation for success that everyone becomes extremely cautious.

"We're afraid to give it up and we're afraid to drill," one landman moaned. "We get to thinking—if they want it, it must be good. But we have to act on the basis of our scientific information or we're lost."

Lectures in

99th class of Lectures in Science and Engineering at Baytown Research Center last June studied under Dr. R. E. Treybal of New York University. First two-week lecture session was conducted for refinery scientists in 1946.

TECHNICAL obsolescence of manpower is a problem as real to modern industry as outmoded tools and equipment. Skills grow rusty; techniques become obsolete. Today's petroleum scientist is hard put to keep in contact with the fundamentals of his field of study once he leaves the university campus.

A research manager put it this way recently: "We find that by the time a man becomes a good oil chemist, he is no longer a chemist in the broad sense of the word."

One solution to this, oil companies have found, is periodically to send the scientist back to the halls of ivy. As another answer, the Humble Company brings prominent educators to its Baytown (Texas) Research Center to present short, intensive courses in basic science subjects.

This program, which in effect brings the university to the man, is called the Humble Lectures in Science and Engineering. For 15 years, it has provided Baytown Refinery's technical task force an unusual opportunity to stay abreast of developments in the ever-changing world of science and engineering.

THIS FALL, the 100th lecture course in the series was conducted by two University of Texas professors on theoretical organic chemistry. Dr. F. A. Matsen was one of Baytown's first lecturers back in 1946 and since that time has conducted five courses—more than any other professor. This noted theorist in chemistry and physics was assisted this fall by Dr. Rowland Pettit, a brilliant young Australian chemist who, like Dr. Matsen, is a consultant for the Humble Company.

Up to the century course, Humble has offered graduate-level courses to its chemists, physicists, mathematicians, and engineers led by 77 professors from 38 colleges and universities in 16 states and four foreign countries. Eminent scientists all, these professors are known and respected around the world.

n Science

Graduate-level courses help Baytown researchers keep technical skills sharp

Take Dr. Linus C. Pauling of California Institute of Technology, who lectured at Baytown in 1951 on the nature of the chemical bond. He won the 1954 Nobel Prize in chemistry for unlocking some of the age-old mystery of what holds the atom together.

Dr. Willard F. Libby, former member of the Atomic Energy Commission and professor at UCLA, taught a course for Humble just last year. His 1960 Nobel Prize in chemistry was for perfecting the radio-carbon dating process.

Two other visiting professors—Sir C. K. Ingold of the University of London, and Sir Hugh S. Taylor of Princeton—were knighted by Queen Elizabeth for scientific accomplishments.

Five to eight courses, with men like these at the lectern, are scheduled at Baytown each year. Subjects range from the simple-sounding, such as "mixing," to tongue-tanglers like "thermodynamics of nonelectrolytic solutions." The typical lecture originates and proceeds something like this: first, Baytown Refinery's 350 technical people are polled as to subjects desired. Then an outstanding professor is chosen in that field and invited to the research center for, usually, two weeks.

THE GUEST professor exercises full freedom in selecting and presenting his material. Class size is small, from 9 to 16 persons, creating an atmosphere of informality and close association between the lecturer and student. Courses are conducted at Company expense during the working day and class members are assigned full time for the two-week period.

Enrollment is strictly voluntary, but the vast majority of Baytown scientists take a course, on the average, every two years. Two research men—Sam Bethea and A. M. Souby—have completed 13 of the 99 courses.

Each course represents about a semester of graduate study, so the classroom pace is full speed ahead. First-timers anticipating a respite from workaday duties find themselves furiously scribbling notes and formulae most of the day, and burning midnight oil over homework.

"These are not courses in refining technology," explains Dr. J. L. Franklin, who helped institute and still coordinates the lectures. "Nor are they vocational refresher classes. Ours are fundamental science and engineering courses, aimed at advancing levels of technical training. They are comparable to courses available in graduate schools of the best universities."

THE two-week lectureship, not an exclusive Baytown idea, has been employed at other Company and affiliated research centers—though not for as many years or on such a regular basis. Esso Research and Engineering Company, Humble's research affiliate, inaugurated a similar program at Linden, New Jersey, in 1960. Distinguished educators have also presented lecture courses at Humble's Houston Research Center and Baton Rouge Laboratories from time to time.

Humble's Lectures in Science and Engineering is only one program demonstrating the Company's concern for scientific growth of the individual research man. Adequate libraries and technical information facilities also contribute to this growth as do seminars, forums, and conferences with consultants and outside authorities.

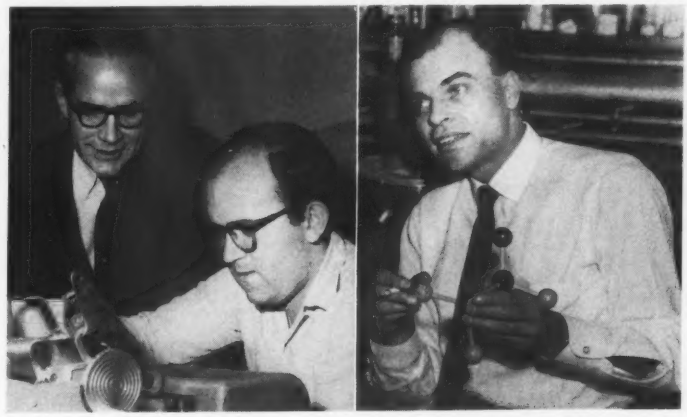
One of the most enthusiastic boosters of these stimulating and rewarding science lectures is W. D. Seyfried, who in 1946 was a young chemical engineer enrolled in the first course taught by Dr. Matsen. He is now Humble's Manager of Research, responsible for a research program in which the Company invested $35 million last year.

"We can't expect spectacular *specific* benefits from these lectures," says Mr. Seyfried. "But when our research people maintain lively interest in the basic sciences, they are able to apply this knowledge to Company problems. Another thing: through this program, we have developed fine relations with many schools, and forged, we think, a strong link between industry and education."

The 100th lecture series at Baytown Research Center was an occasion for real, if traditionally subdued, scientific pride. There was no special fanfare, and hardly more than passing notice of this milestone in Humble's farsighted experiment with pure science education.

What was on the agenda? "Mainly work and study, just like the other 99 courses," Dr. Franklin said.

"That's what research is all about."



Co-lecturers for the 100th course at Baytown this fall were two professors from University of Texas—Dr. F. A. Matsen, pictured at left with UT student, and Dr. Rowland Pettit.

Enjay And Stevens Acquire National Plastic

Enjay Chemical Company, a division of Humble Oil & Refining Company, and J. P. Stevens and Co., Inc., a prominent textile company, have purchased the operating assets and facilities of National Plastic Products Company. A new company, jointly owned by Enjay and Stevens, has been formed to continue the National Plastic name and its present management.

For more than a year, Enjay and Stevens have been engaged in a joint research project to develop the manufacture and utilization of textile fibers from polypropylene plastic. A jointly owned pilot plant is in operation at Stevens' research laboratory in Garfield, New Jersey.

Enjay, which has its headquarters in New York City, entered the plastics field last year with the introduction of Escon polypropylene, produced at Humble's Baytown, Texas, polyolefin plant.

Stevens, also with headquarters in New York City, is one of the oldest and most diversified textile firms in the U.S. Its products include all types of man-made fabrics and a wide range of woolen, worsted, and cotton fabrics.

National Plastic Products Company, organized in 1941, manufactures a diversified line of plastic filaments of Saran, polyolefins and nylon, Nevamar decorative laminates, molded products and extrusions.

The company operates a wholly owned subsidiary, Richmond Plastics, Ltd., of Richmond, P.Q., Canada. In addition to offices in New York City, the company maintains offices and warehouses in Long Beach and Burlingame, California; Portland, Oregon; Denver; Chicago; and Miami. It is also constructing a warehouse in Arlington, Texas.

National Plastic is now in commercial production of polypropylene monofilaments. This operation will be further expanded to include multi-filaments, staple, and textile fibers. The company's manufacturing facilities at Odenton, Maryland, will be used as the nucleus for development of the polypropylene fiber operation.

Storm Damage Heavy For Baytown Employees

While the Humble Company weathered Hurricane Carla with relatively light damage to its facilities along the Gulf Coast, some of the company's employees in the storm area were not so fortunate.

This was especially true at Baytown, Texas, where Humble has a large refinery and several other types of operations. Here more than 250 evacuated employees returned to their homesites after the storm only to find that their houses had been completely destroyed or heavily damaged by Carla's violent winds and the unprecedented high tides created by the hurricane.

Acting in cooperation with Baytown's Civil Defense organizations, Humble immediately assigned a task force of employees and equipment to help the storm victims salvage what they could of their belongings and clean up the debris. Tools and special equipment from the refinery were made available to employees who needed them for emergency repairs to homes and property.

Two weeks after the storm, the clean-up work was still in progress and the full extent of the property losses had not yet been assessed.

Meanwhile, from Humble headquarters in Houston, Board Chairman Morgan J. Davis announced on September 19 that the Company was donating $50,000 to the Hurricane Carla Fund being raised by the American Red Cross.

Hurricane made shambles of many employees' homes in Baytown area; Humble sent men and machines to help clean up debris and salvage victims' belongings.

Goodykoontz To Head Eastern Region

Robert O. Goodykoontz, general manager of Humble's Central Region, has been named vice president in charge of the company's Esso Standard, Eastern Region, effective January 1, 1962.

William W. Bryan, Humble's vice president for marketing, who also headed the Eastern Region for the past year, has recently returned to his primary duties at the company's headquarters in Houston, where he and his staff will coordinate Humble's marketing expansion and its nation-wide marketing activities.

Until January 1, Alex A. Diffey, general manager of the Esso Standard, Eastern Region, will have full responsibility for that region's operations.

Recent Headquarters Appointments

THE following appointments to positions in Humble's headquarters organization in Houston have been announced since the last issue of THE HUMBLE WAY:

Public Relations Department

EDWARD LITTLEJOHN, manager. He had been assistant manager of public relations for Standard Oil Company (New Jersey).

A. B. PENNY, public relations adviser. He had been assistant manager of Humble Division's Public Relations Department.

GEORGE A. LLOYD, head of the section on citizenship training, highway traffic, and communications. He had been coordinator of public affairs for Esso Standard Division.

WALTER G. BEACH, head of the publications and information distribution section. He had been head of the publications division in the Humble Division.

JAY H. ROSE, head of the press relations and special writing projects section. He had been head of press relations and projects division in the Humble Division.

JACK P. SHANNON, head of the general public relations services section. He had been head of the Humble Division's public relations services division.

Manufacturing Department

RUSSELL G. ERNEST, assistant manager of specialty products planning. He had been assistant manager of consumer sales in the Esso Standard, Eastern Region.

CHARLES B. MOORE, assistant manager of fuel products and general planning. He had been assistant head of the technical division at Baton Rouge refinery.

General Services Department

J. M. CROUCH, assistant manager. He had been assistant manager of the Humble Division's General Services Department.

J. W. PERRY, head of the administrative section. He had been administrative advisor in Humble Division's General Services Department.

J. B. TURNER, JR., head of the engineering section. He had been engineering advisor in the Humble Division's General Services Department.

G. L. MCGONIGLE, building manager and head of the office building section. He had been serving on special assignment on the new Humble Building project.

W. W. DENT, head of the stationery, printing, and reproduction section. He had been head of the stationery, printing, and reproduction division of the Humble Division's General Services Department.

Marketing Department

J. R. MUEHLBERG, coordinator of aviation sales. He had been manager of aviation sales in the Esso Standard Division.

A. R. CURTIS, coordinator of asphalt sales. He had been manager of asphalt sales for the Esso Standard Division.

C. L. COVER, coordinator of L.P.G. sales. He had been with petroleum specialties, Esso Standard, Eastern Region.

J. B. SMITH, coordinator of lubricating and process oil sales. He had been manager of lubrication and commercial sales for the Esso Standard Division.

E. T. ANDERSON, coordinator of solvents sales. He had been wholesale sales engineer in Penola Division.

E. V. DORR, coordinator of national accounts and government sales. He had been manager of national accounts sales for the Esso Standard Division.

E. W. BALL, coordinator of railroad, inland marine, and gas transmission line sales. He had been manager of railroad sales for the Esso Standard Division.

G. N. JENKINS, coordinator of sales engineering. He had been assistant manager of sales engineering for the Esso Standard Division.

W. J. MURR, coordinator of trade relations. He had been manager of trade relations for the Esso Standard Division.

C. E. SMITH, coordinator of wax, grease, and special products sales. He had been manager of the Manufacturing Division's special products plant.

T. W. WILSON, coordinator of sales promotion. He had been manager of motor products advertising in the Esso Standard, Eastern Region.

S. K. BRITT, coordinator of advertising. He had been manager of sales promotion, advertising, and publications in the Southwest Region's Marketing Department.

J. A. FITE, JR., coordinator of service station investments and development. He had been acting retail sales manager in the Southwest Region's Marketing Department.

CARL B. YANTIS, coordinator of merchandising and training. He had been sales manager in the Central Region.

R. H. CRUM, coordinator of TBA. He had been TBA and specialties manager in the Esso Standard, Eastern Region.

R. T. JENKINS, coordinator of retail heating oil sales. He had been assistant manager, Employee Relations (Marketing), in the Esso Standard, Eastern Region.

W. M. PITCHER, coordinator for heavy fuels and marine bunkers. He had been consumer sales manager of the New York Area, Esso Standard, Eastern Region.

S. H. MCKENNA, marketing adviser responsible for sales of lubricants and waxes to Standard Oil Company (Kentucky). He had been technical representative in the Penola Division.

J. F. TREVENEN, marketing adviser responsible for the purchase and sale of wholesale lubricants. He had been manager of wholesale lubricating oil sales in the Penola Division.

J. C. Morgan, coordinator of service stations and bulk plants. He had been construction and maintenance manager in the Esso Standard, Eastern Region.

J. H. Lumpkin, Jr., automotive coordinator. He had been automotive manager, Esso Standard, Eastern Region.

H. E. Bass, coordinator of cost and distribution analysis. He had been manager of operations in the Southwest Region's Marketing Department.

L. W. Wagner, office administration supervisor. He had been assistant coordinator of management development in the Esso Standard, Eastern Region.

R. E. Dugat, coordinator of marketing economics. He had been assistant manager of marketing research in the Southwest Region.

H. A. Ricards, coordinator of marketing research. He had been manager of distribution and exploratory research in the Economics and Marketing Research Department of the Esso Standard, Eastern Region.

Supply and Transportation Department

D. M. Cox, supply and transportation coordinator. He had been manager of supply and distribution.

John G. Yeager, manager for crude oil. He had been manager of the Humble Division's Crude Oil Department.

C. C. Garvin, Jr., manager for products supply and distribution. He had been manager of the Supply Department of the Esso Standard Division.

Haylett O'Neill, manager for purchasing. He had been purchasing agent for the Humble Division.

N. C. Dunn, manager for traffic. He had been traffic manager of the Baton Rouge refinery.

J. E. McCleary, head of crude oil contracts and negotiations. He had been assistant manager of the Humble Division's Crude Oil Department.

A. J. Ferguson, coordinator of planning, evaluation, and forecasts. He had been manager of the Esso Standard Division's Crude Oil Purchasing Department.

G. W. LeVan, head of the division order group. He had been head of division order and title activities in the Humble Division.

Joe C. Delaney, head of the crude oil evaluation section. He had been head of crude oil evaluation in the Humble Division.

Employee Relations Department

Harry G. Taylor, coordinator of professional recruitment and placement. He had been head of the technical department at the Bayway refinery.

Robson T. Young, coordinator of labor relations. He had been employee relations manager at the Bayway refinery.

Research Department

R. R. Thompson, research coordinator. He had been chief of geophysics research in the Southwest Region.

Treasury Department

L. W. Groce, bank relations manager. He had been an assistant treasurer in the Southwest Region.

W. H. Rowland, finance manager. He had been manager of the finance and real estate division in the Treasurer's Department, Esso Standard Division.

Exploration Department

E. D. Pressler, coordinator of reserves. He had been head of the statistical and evaluation section in Exploration Department of the Southwest Region.

The Humble Way

Vol. XVI No. 4

Fall, 1961

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HUMBLE OIL & REFINING COMPANY

P. O. Box 2180, Houston 1, Texas

Board of Directors

John W. Brice
Morgan J. Davis
H. W. Ferguson
R. J. Gonzalez
H. W. Haight
J. K. Jamieson
Nelson Jones
William Naden
D. W. Ramsey, Jr.
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C. E. Reistle, Jr.

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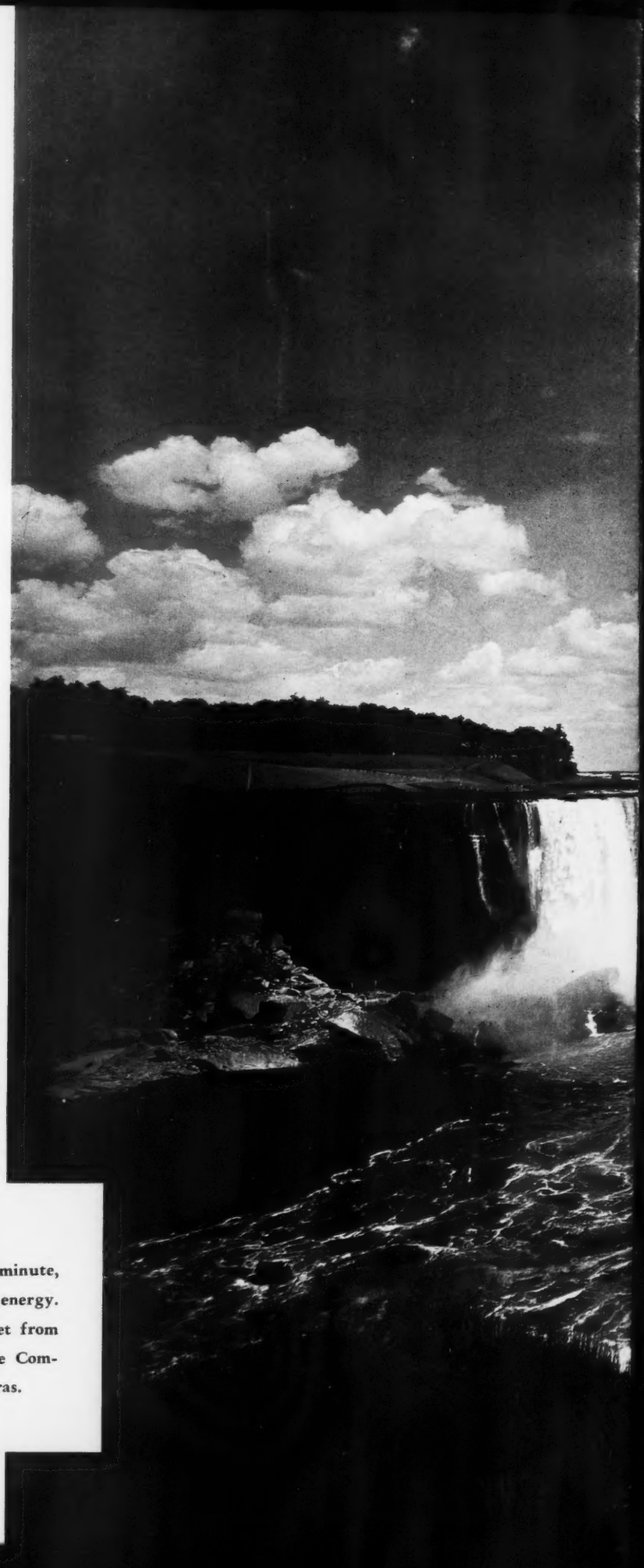
High above Houston streets, a workman on the new Humble Building inserts a tube of Butyl rubber as a seal between pre-cast concrete mosaic panels. Caulking will complete seal.

The Humble Way
P. O. Box 2180, Houston 1, Texas



A PICTURE OF ENERGY

With 187,000 tons of water roaring over its brink each minute, Niagara Falls makes an impressive display of natural energy. Less dramatic, but more important, is the energy we get from petroleum. In gasoline alone, for example, the Humble Company supplies as much energy each minute as *six* Niagaras.